



PATENT  
Atty. Docket No.: FUSI-04105

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Group Art Unit: 2165
	)	
Multer et al.	)	Examiner: Abel Jalil, Neveen
	)	
Serial No.: 09/753,537	)	<b>TRANSMITTAL LETTER</b>
	)	
Filed: January 2, 2001	)	162 N. Wolfe Rd.
	)	Sunnyvale, CA 94086
For: <b>BINARY DATA</b>	)	(408) 530-9700
<b>SYNCHRONIZATION ENGINE</b>	)	
	)	Customer No. 28960
	)	

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Sir:

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The Commissioner is authorized to charge any additional fee or credit any overpayment to our Deposit Account No. 08-1275. **An originally executed duplicate of this transmittal is enclosed for this purpose.**

Respectfully submitted,  
HAVERSTOCK & OWENS LLP

Dated: 7-7-08

By: Thomas B. Haverstock  
Thomas B. Haverstock  
Reg. No. 32,571

Attorneys for Applicant(s)

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HAVERSTOCK & OWENS LLP.

Date: 7/7/08 By: LS



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HAVERSTOCK & OWENS LLP.

Date: 7/7/08 By: LA

Attorneys for Applicant(s)



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Multer et al.	)	Examiner: Abel Jalil, N.
Application No.: 09/753,537	)	
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<b>SYNCHRONIZATION ENGINE</b>	)	Sunnyvale, California 94086
	)	(408) 530-9700
	)	Customer No. 28960

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Sir:

In furtherance of the Applicants' Notice of Appeal filed on May 7, 2008, this Appeal Brief is submitted. This Appeal Brief is submitted in support of the Applicants' Notice of Appeal, and further pursuant to the rejection mailed on February 7, 2008, in which Claims 80-89 and 109-116 were rejected. The Applicants submit this Appeal Brief to the Board of Patent Appeals and Interferences in compliance with the requirements of 37 C.F.R. § 41.37, as stated in *Rules of Practice Before the Board of Patent Appeals and Interferences (Final Rule)*, 69 Fed. Reg. 49959 (August 12, 2004). The Applicants contend that the rejections of Claims 80-89 and 109-116 in this proceeding are in error, were previously overcome and are overcome again by this appeal.

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**I. REAL PARTIES IN INTEREST**

As the assignee of the entire right, title, and interest in the above-captioned patent application, the real party in interest in this appeal, is:

FusionOne, Inc.  
1 Almaden Boulevard, 11<sup>th</sup> Floor  
San Jose, CA 95113

per the assignment document filed on July 23, 2001.

**II. RELATED APPEALS AND INTERFERENCES**

The Applicants are not aware of any other appeals or interferences related to the present application.

**III. STATUS OF THE CLAIMS**

Claims 80-89 and 109-116 are involved in the appeal. Claims 1-79 and 90-108 have previously been canceled. Claims 80-87 and 109-116 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,321,236 to Zollinger et al. ("Zollinger", a copy of which is attached as Exhibit A). Claim 88 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Zollinger in view of U.S. Patent No. 5,519,433 to Lappington et al. ("Lappington", a copy of which is attached as Exhibit B). Claim 89 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Zollinger in view of U.S. Patent No. 5,574,906 to Morris ("Morris", a copy of which is attached as Exhibit C).

**IV. STATUS OF THE AMENDMENTS FILED AFTER FINAL REJECTION**

No amendments have been filed after the Office Action mailed on February 7, 2008.

**V. SUMMARY OF CLAIMED SUBJECT MATTER**

The invention disclosed in the present application number 09/753,537 is directed to a system discerning specific changes that have occurred to a file, and using the changes to accomplish synchronization of the files on the user's various devices.

For example, claim 80 recites:

80. A synchronizer system including a first synchronizer provided on a network coupled processing device comprising:  
computer code, implemented on a processing device, for comparing at least one file on a device and a record of the file on the device, and providing binary differencing data between the file and the record of the file;

As explained in the specification, for example, at page 20, line 20 through page 21, line 30, in one embodiment, the present invention employs an application object 910 (Fig. 9A) which maps data from proprietary applications 810 into a "universal" data structure which may be used by the device engine components to generate binary differencing data. The present invention further includes an Application Object Store (AOS) 920 which includes a copy of the device's data at a point just after the previous data extraction and synchronization occurred. The generic output of the application object is provided to a delta module 950. The delta module 950 is a differencing engine which calculates differences in data between the output of the application object 910 and the copy of the data which is provided in AOS 920. The delta module outputs binary differencing data.

Claim 80 further recites:

a transaction generator, implemented on a processing device, providing at least one binary difference transaction including said binary differencing data and at least one data field type to an output for forwarding to a network coupled storage server, the server using the binary differencing data to synchronize at least one other network coupled processing device.

As explained in the specification, for example, at page 25, line 22 through page 27, line 15, and as shown in Fig. 9B, the binary differencing data may be sent to a sync server (such as 980 and 982 in Fig. 9B). Other devices may link to the sync servers to download the binary differencing data which indicates changes to be made in order to synchronize the data.

Furthermore, as explained in the specification, for example, at page 30, lines 4-9, the Application Object maps the party application data fields to the system's domain. Moreover, as also explained in the specification, for example, at page 23, lines 6-19, a field mapping module

935 allows for a user to re-map certain interpretations of items. Examples of a data field type are included within the specification, for example, at page 36, line 18 and page 36, lines 29-30.

Independent claim 109 similarly recites “computer code for comparing at least one file on a network coupled device in communication with the network coupled server and extracting binary differencing data representing the difference between the file and a record of the file,” as well as, “a transaction generator providing at least one transaction including said binary differencing data to an output of the network coupled server.”

Independent claim 116 has similar limitations, but refers to at least two different “binary differencing engines” which are coupled to two different network coupled devices. Claim 116 further recites that each of network coupled devices is coupled to a storage device for storing binary differencing data from and outputting binary differencing data to said at least first and second binary differencing engines. In accordance with the invention, a plurality of devices may include binary differencing engines as discussed above, which exchange binary differencing data with each other.

## **VI. GROUND OF REJECTION AND OTHER MATTERS TO BE REVIEWED ON APPEAL**

The following issues are presented in this Appeal Brief for review by the Board of Patent Appeals and Interferences:

1. Whether Claims 80-87 and 109-116 are properly rejected under 35 U.S.C. § 102(e) as being anticipated by Zollinger.
2. Whether Claim 88 is properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Zollinger in view of Lappington.
3. Whether Claim 89 is properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Zollinger in view of Morris.

## **VII. ARGUMENT**

### *Grounds for Rejection*

Within the Office Action, Claims 80-87 and 109-116 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Zollinger.

*Outline of Arguments*

In the discussion that follows, the Applicants discuss the teachings of Zollinger, and how Zollinger does not teach the claimed invention. As will be discussed in detail below, Zollinger does not teach a transaction generator providing at least one binary difference transaction including said binary differencing data and at least one data field type to an output for forwarding to a network coupled storage server.

1. Zollinger does not teach a transaction generator providing at least one binary difference transaction including said binary differencing data and at least one data field type to an output for forwarding to a network coupled storage server.

Zollinger teaches a method and system that allows changes made to an original database table found on a server computer to be reflected in client copies of the database table based on intermittent client requests for synchronization. The server makes periodic updates of table differences between a current table receiving database change events and a reference table. Each client copy of a database table and update generated by the server has a sequential version number associated therewith. The server compares the version number of a client copy of a database table with the most recent version number of the table on the server to determine which updates need be applied in order to make the client copy current. Next, the updates are translated from a generic format into instructions that are specific to the type of database engine being run on the client. Finally, the instructions are transmitted to the client (along with the new version number) so that the client may operate the database engine to apply the instructions for making the database table current with the original managed on the server. [Zollinger, Abstract] However, Zollinger does not teach a transaction generator providing at least one binary difference transaction including said binary differencing data and at least one data field type to an output for forwarding to a network coupled storage server.

Within the Office Action of February 7, 2008, several sections of Zollinger were cited as teaching a transaction generator providing at least one binary difference transaction including said binary differencing data and at least one data field type to an output for forwarding to a network coupled storage server. Specifically, the cited sections of Zollinger include col. 3, lines 45-56; col. 10, lines 45-65; col. 12, lines 9-14 and col. 12, lines 41-56. Each section is discussed immediately below, and it is clearly shown that none of the sections teach a transaction generator providing at least one binary difference transaction including said binary differencing data and at

least one data field type to an output for forwarding to a network coupled storage server.

Zollinger teaches:

Furthermore, the updates isolate only the information that has changed over time so that a minimum amount of data may be sent to a client. Finally, the updates are stored in a generic format so that they may be translated to specific database engine instructions corresponding to the actual type of database engine residing on a particular client.

A client will initially receive a client copy of a database table having a particular version identifier, such as a version number, date stamp, etc. At some later time, the client will reconnect with the server to request synchronization of the client copy of the database table to make it current with the original database table that is on the server. [Zollinger, col. 3, lines 45-56]

This section of Zollinger merely teaches storing changes in a generic format which can be translated to specific database engine instructions depending on the type of database engine. Furthermore, this section teaches the client receiving a database table with a version identifier such as a version number or a date stamp. However, there is nothing in this section that teaches providing at least one binary difference transaction including said binary differencing data and at least one data field type.

Zollinger also teaches:

Between the state of the database table in FIG. 2A and FIG. 2B, three changes were made. Namely, the employee in row one became married, a new employee was added (Mr. Mauss), and a former employee deleted at row 2 (Mr. Presley). In FIG. 3A, these changes are stored in an arbitrary generic format with a change-type indicator separated by a ":" followed by a location field separated by a "=>" followed by the data of the change itself. For modifications to existing table cells, the change-type indicator is signified by a "M," the location of the cell is given by the row number and the column number, and the data is the new cell data. For additions of a new record or row, the change-type indicator is "A," the location field indicates after which row the new record should be inserted, and the data field indicates all the cells therein. Finally, a deletion will be signified by a "D" change-type indicator and the location field contains the row number to be deleted (not data is associated with a delete).

Once the differences have been generated at step 82, the differences are stored in generic format and the current version number (in this case 1.1) is associated with the difference update at step 84. [Zollinger, col. 10, lines 45-65]

Again, this section of Zollinger teaches storing changes in a generic format, a change-type indicator, a location field and the data of the change. However, there is nothing in this section that teaches providing at least one binary difference transaction including said binary differencing data and at least one data field type.



Zollinger teaches:

Furthermore such updates are stored in a generic format which may later be translated to database engine instructions destined for database engine types found on the appropriate client requesting synchronization. Typically, such updates are handled by the differencing engine 30 as shown in FIG. 1. [Zollinger, col. 12, lines 9-14]

This section of Zollinger also teaches storing updates in a generic format, but again does not teach providing at least one binary difference transaction including said binary differencing data and at least one data field type.

Zollinger teaches:

At step 102, the state of the existing client copy of the database tables and their particular version number are determined, again this information may be provided in the request from the client or may be centrally stored in the profile database 56 or other area accessible to the synchronizer component 46. Note that some client copies of a database table may not yet exist at the client and will need to be copied over from the server.

Each client will have at least one database engine found thereon for creating and managing database tables. There are a number of different types or varieties of database engines that can be used by a client and the client will receive database table differences and/or database tables themselves in the appropriate format for the database engine associated with the database table or other data store. [Zollinger, col. 12, lines 41-56]

This section of Zollinger teaches determining the state of the client copy of the database tables and the version number. Zollinger also teaches copying the database table to the client if it does not exist. Zollinger also teaches varieties of database engines which receive database differences or tables in the appropriate format for the database engine. However, yet again, Zollinger teaches nothing about providing at least one binary difference transaction including said binary differencing data and at least one data field type.

Therefore, within the cited sections of Zollinger, there is nothing teaching providing at least one binary difference transaction including said binary differencing data and at least one data field type. Since a reference must teach every element of a claim for a rejection under 35 U.S.C. § 102 to be proper, clearly, the rejection of the claimed invention based on Zollinger is improper since Zollinger does not teach every element of the claimed invention.

2. The claims distinguish over Zollinger.

The claims are grouped separately below to indicate that they do not stand or fall together.

a. Claims 80-87

The independent Claim 80 is directed to a synchronizer system including a first synchronizer provided on a network coupled processing device. The synchronizer system of Claim 80 comprises computer code, implemented on a processing device, for comparing at least one file on the device and a record of the file on the device, and providing binary differencing data between the file and the record of the file and a transaction generator, implemented on a processing device, providing at least one binary difference transaction including said binary differencing data and at least one data field type to an output for forwarding to a network coupled storage server, the server using the binary differencing data to synchronize at least one other network coupled processing device. As described above, Zollinger does not teach providing at least one binary difference transaction including said binary differencing data and at least one data field type. For at least these reasons, the independent Claim 80 is allowable over the teachings of Zollinger.

Claims 81-87 are dependent upon the independent Claim 80. As discussed above, the independent Claim 80 is allowable over the teachings of Zollinger. Accordingly, Claims 81-87 are all also allowable as being dependent upon an allowable base claim.

Furthermore, the dependent Claim 84 claims the output is coupled to a second synchronizer and the binary difference transaction is provided to said second synchronizer. There is nothing in the cited section of Zollinger that teaches a second synchronizer. The only cited section of Zollinger with the Office Action is Figure 1 which clearly only shows one synchronizer, thus not a first and a second synchronizer. For at least these additional reasons, the dependent Claim 84 is allowable over the teachings of Zollinger.

Similarly, the dependent Claims 85-87 also include the limitation of a second synchronizer as well as additional limitations. However, the Office Action merely cites Figure 1 of Zollinger again. The claimed limitations of Claim 85-87 are clearly not taught by Figure 1 of Zollinger. For at least these additional reasons, the dependent Claims 85-87 are all allowable over the teachings of Zollinger.

b. Claims 109-115

The independent Claim 109 is directed to a synchronizer provided on a network coupled server. The synchronizer of Claim 109 comprises computer code, implemented on a processing device, for comparing at least one file on a network coupled device in communication with the network coupled server and extracting binary differencing data representing the difference between the file and a record of the file and a transaction generator, implemented on a processing device, providing at least one transaction including said binary differencing data and at least one data field type to an output of the network coupled server. As described above, Zollinger does not teach providing at least one binary difference transaction including said binary differencing data and at least one data field type. For at least these reasons, the independent Claim 109 is allowable over the teachings of Zollinger.

Claims 110-115 are dependent upon the independent Claim 109. As discussed above, the independent Claim 109 is allowable over the teachings of Zollinger. Accordingly, Claims 110-115 are all also allowable as being dependent upon an allowable base claim.

c. Claim 116

The independent Claim 116 is directed to a binary differencing synchronization system. The binary differencing synchronization system of Claim 116 comprises at least a first binary differencing engine coupled to a first network coupled device, at least a second binary differencing engine coupled to a second network coupled device and a storage device coupled to the first and the second network coupled devices storing binary differencing data and at least one data field type from, and outputting binary differencing data and at least one data field type to, said at least first and second binary differencing engines. As described above, Zollinger does not teach storing binary differencing data and at least one data field type from, and outputting binary differencing data and at least one data field type to, said at least first and second binary differencing engines. For at least these reasons, the independent Claim 116 is allowable over the teachings of Zollinger.

*Grounds for Rejection*

Within the Office Action, Claim 88 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Zollinger in view of Lappington.

*Arguments*

Claim 88 is dependent upon the independent Claim 80. As discussed above, the independent Claim 80 is allowable over the teachings of Zollinger. Accordingly, Claim 88 is also allowable as being dependent upon an allowable base claim.

*Grounds for Rejection*

Within the Office Action, Claim 89 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Zollinger in view of Morris.

*Arguments*

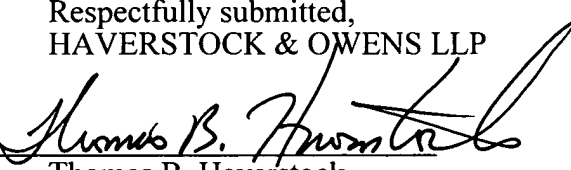
Claim 89 is dependent upon the independent Claim 80. As discussed above, the independent Claim 80 is allowable over the teachings of Zollinger. Accordingly, Claim 89 is also allowable as being dependent upon an allowable base claim.

3. CONCLUSION

For the above reasons, it is respectfully submitted that the Claims 80-89 and 109-116 are allowable over the cited prior art references. Therefore, a favorable indication is respectfully requested.

Respectfully submitted,  
HAVERSTOCK & OWENS LLP

Dated: 7-7-08

By:   
Thomas B. Haverstock  
Reg. No. 32,571  
Attorneys for Applicant(s)

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22313-1450

HAVERSTOCK & OWENS LLP.

Date: 7/7/08 By: JA

**VIII. CLAIMS APPENDIX**

This appendix includes a list of the claims under appeal.

1-79. (canceled)

80. A synchronizer system including a first synchronizer provided on a network coupled processing device comprising:  
computer code, implemented on a processing device, for comparing at least one file on the device and a record of the file on the device, and providing binary differencing data between the file and the record of the file; and  
a transaction generator, implemented on a processing device, providing at least one binary difference transaction including said binary differencing data and at least one data field type to an output for forwarding to a network coupled storage server, the server using the binary differencing data to synchronize at least one other network coupled processing device.
81. The synchronizer system of claim 80 wherein the output is coupled to a network, and the first synchronizer is coupled to the storage server via the network, the storage server receiving said binary difference transaction from said first synchronizer.
82. The synchronizer system of claim 81 wherein the first synchronizer receives at least one binary difference transaction from the storage server, and further including computer code for applying the receiver binary difference transaction to the at least one file on at least one other network coupled processing device.
83. The synchronizer system of claim 82 wherein the first synchronizer includes code for updating a record of the file on the at least one other network coupled processing device subsequent to applying the received binary difference transaction.
84. The synchronizer system of claim 80 wherein the output is coupled to a second synchronizer and the binary difference transaction is provided to said second synchronizer.

85. The synchronizer system of claim 84 wherein the second synchronizer is on said at least one other network coupled processing device.
86. The synchronizer system of claim 84 wherein the second synchronizer is coupled to a network, and the output of the transaction generator is coupled to the network and the second synchronizer.
87. The synchronizer system of claim 84 wherein the output is coupled to a network and the first synchronizer is coupled to the storage server via the network receiving said binary difference transaction from said first synchronizer via the network, and the second synchronizer is coupled to the storage server.
88. The synchronizer system of claim 80 wherein the first synchronizer further includes an encryption routine encrypting the binary difference transaction.
89. The first synchronizer system of claim 80 wherein the synchronizer further includes a compression routine.
90. (canceled)
- 91-108. (canceled)
109. A synchronizer provided on a network coupled server, comprising:
  - computer code, implemented on a processing device, for comparing at least one file on a network coupled device in communication with the network coupled server and extracting binary differencing data representing the difference between the file and a record of the file; and
  - a transaction generator, implemented on a processing device, providing at least one transaction including said binary differencing data and at least one data field type to an output of the network coupled server.
110. The synchronizer of claim 109 wherein the record of the file is provided on the network coupled device.

- 111. The synchronizer of claim 109 wherein the record of the file is provided on the network coupled server.
- 112. The synchronizer of claim 109 wherein the record of the file is a previous version in time of the file.
- 113. The synchronizer of claim 109 wherein the synchronizer further includes application code to modify a second version of the file by applying said binary differencing data to the second version of the file.
- 114. The synchronizer of claim 113 wherein the second version of the file is on a second network coupled device.
- 115. The synchronizer of claim 113 wherein the second version of the file is on the network coupled server.
- 116. A binary differencing synchronization system, comprising:
  - at least a first binary differencing engine coupled to a first network coupled device;
  - at least a second binary differencing engine coupled to a second network coupled device;and
  - a storage device coupled to the first and the second network coupled devices storing binary differencing data and at least one data field type from, and outputting binary differencing data and at least one data field type to, said at least first and second binary differencing engines.

**IX. EVIDENCE APPENDIX**

**STATEMENT**

Pursuant to 37 C.F.R. § 41.37(c)(1)(ix), the following is a statement setting forth where in the record the evidence of this appendix was entered by the examiner:

<b>Evidence Description:</b>	<b>Where Entered:</b>
U.S. Pat. No. 6,321,236	Office Action mailed July 26, 2007
U.S. Pat. No. 5,519,433	Office Action mailed November 28, 2006
U.S. Pat. No. 5,574,906	Office Action mailed November 22, 2004
Office Action February 7, 2008	Examiner Office Action

**X. RELATED PROCEEDINGS APPENDIX**

There are no related proceedings.